2013 SURVEY OF CHARCOAL BUSINESSES IN URBAN CENTERS OF SIERRA LEONE

DECEMBER, 2014
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ACKNOWLEDGEMENTS

This Charcoal Survey is the first to be conducted by Statistics Sierra Leone (SSL) so as to obtain pertinent information on charcoal sales, employment and other information in the country. Charcoal form part of the major source of energy for cooking in many urban households. The charcoal product is part of the forestry output included in the computation of the gross domestic product (GDP), which is a key development indicator used to assess the performance of the economy. This was conducted under the Statistics Act 2002, which makes it mandatory for all business establishments operating in Sierra Leone to respond to Statistics Sierra Leone’s data requests. The Act also stipulates that the content of individual returns received would be kept confidential and used only for statistical purposes.

The aim of this charcoal survey is to provide basic statistics (such as price, ownership status, employment, and expenditures) of charcoal businesses operating in the urban cities.

This survey report has been compiled by a dedicated Team of Statisticians and data collectors and supervisors under my Supervision. SSL Management therefore acknowledges the immense contribution which the following people made towards the conduct of the survey: Abu Bakarr Turay, Director of Economic Statistics Division; Isata M. Allieu-Keikura, Statistician, Agriculture Statistics Section and Martha K. Koroma, Assistant Statistician, Agriculture Statistics, Statistics Sierra Leone (SSL).

We also wish to thank our Data Collectors, Supervisors and our valued respondents who took part in the data collection exercise.

We are also grateful to Government for funding this exercise.

Finally, we thank God for everything we have been able to accomplish with this survey.

Mohamed King Koroma
Statistician General
EXECUTIVE SUMMARY

Many surveys and even the 2004 Population and Housing census have revealed that the majority of Sierra Leonean households depend on traditional fuels (charcoal/fuel wood) to meet their daily energy needs for cooking and kerosene for lighting for many decades. After the civil war, which ended in 2002, people in the rural area have engaged in extensive charcoal and fuel wood production in response to the increasing demand in the urban centers. Today, there is no district among the 12 districts of the country, where charcoal production is not a lucrative business.

At the National level, 87% and 7% of the households use wood and charcoal respectively as the principal sources of energy for cooking in 2004. The pattern of fuel use for cooking is similar at the provincial and district levels. Between the 1985 and 2004 censuses, there were insignificant drops in the uses of Kerosene and Electricity for cooking at national level. However, charcoal use increased from 1 percent in 1985 to 7% in 2004. By locality, the proportion of households using charcoal as a source of fuel for cooking increased from 0.9% in 1985 to 9% in 2004 in the rural area, whereas in the urban areas, the proportion of households using charcoal as a main source energy for cooking increased significantly from 3.5% in 1985 to 34.2% in 2004. This significant increase in the use of charcoal in the urban areas as main energy source for cooking coincided with a decline in the generation and supply of electricity in the country.

These statistics show that charcoal and fuel wood constitute an important component of energy production and consumption in the country. However, a major gap in the monitoring of the contribution of these products to the gross domestic product (GDP) is the absence of comprehensive data on them. Although the production of such items is on the increase, especially as economic activities expand, in mining and other sectors of the economy, data is at best scanty and in most cases not available at all. This survey therefore collects basic information on the sale of these commodities in the urban cities of Freetown, Bo, Kenema and Makeni that guides policy to direct and control charcoal production and consummating in the country. Such information is useful to policy maker as they look for possible ways of expanding sources of energy for households.
This Charcoal survey targeted a sample size of 135 charcoal selling centers selected from a list of 431 charcoal centers in the country. The survey was a nationwide survey, covering the regional cities of Freetown, Bo, Kenema and Makeni. This was conducted under the Statistics Act 2002, which makes it mandatory for all business establishments operating in Sierra Leone to respond to Statistics Sierra Leone’s data requests. The Act also stipulates that the content of individual returns received would be kept confidential and used only for statistical purposes. An invitation letter signed by the Statistician General of SSL was enclosed with all questionnaires to encourage business owners/executives to provide the relevant data relating to their businesses and to assure them of the confidentiality of the data collected. The survey was designed such that Charcoal Establishments were visited several times so as to get the requested data from these establishments. Out of the targeted 135 charcoal establishments, 120 (88.9%) charcoal establishments were successfully interviewed. The non-responses (11.1%) were largely due to delay in retrieving the questionnaires as well as outright refusal to provide the relevant information.

**Coverage and Limitations**

This charcoal survey covered only the sales aspect of the charcoal production; it did not therefore include actual production of charcoal that is going on all over the country as such an activity would usually be covered in a household-based survey.

The survey covered only charcoal businesses operating the regional cities of Freetown, Bo, Kenema and Makeni. The district and other urban towns were not covered. The data is therefore representative at national and regional levels and not at district level.

The administrative data collected were collected from PEMSD of the Ministry of Agriculture, Forestry and Food Security (MAFFS)

**Secondary data and results obtained from the survey shows:**

♦ That 88.1% of respondents were females, which means that only 18.9% were male respondents for this survey.

♦ That majority of persons in the charcoal business (95.1%) are Sierra Leoneans, compared with only 4.9% that are Foreign Nationals. This means that Sierra
Leoneans are mainly in control of the charcoal trade in the country—from the production, transportation, distribution and sale of charcoal all around the country.

- That 63.9% of persons in the charcoal business have never being to school, followed by 23.0% with primary education level and 11.5% with secondary education level. This means that charcoal business is an important source of income for those who never went to school in this country, as 80.5% of them believe that charcoal business is the main source of income;

- That 86.9% of respondents owned their charcoal businesses; of 13.1% who indicated that they were not owners of the business, 49.1% of such businesses were owned by the neighbours, 37.6% were owned by the parents or guardian while 13.3% were owned by other persons including brothers/sisters and friends.

- That about 821 persons were engaged in charcoal business in the regional cities of Western Area (Freetown), Southern Region (Bo), Eastern Region (Kenema) and Northern Region (Makeni). Out of this number, 79.7% were women, while 66.1% were children below 18 years of age. This underlines the important contribution of women and children to household income around the country.

- That the average price per bag (rice bag) is lower in the Eastern Region (Le 10,200 per bag) than any of the other regions; the average price is highest in the Western Area (Le 18,993 per bag), followed by Northern Region (Le 14,500 per bag) and the Southern Region (Le 13,700 per bag).

- That a ‘rice bag’ of charcoal is heavier in the Northern Region weighing 27kg compared with 20kg in the Eastern region and Western Area and 22kg at the National Level.

- That the charcoal trade generated an average of Le 22,990 million in 2012 as income, compared with Le 13,876 million expended in the same period; this means that there is an annual operating profit of Le 9,114 million; the data also shows the East spends only 24.4% of their revenue to cover the cost of supplying the charcoal to the local market, compared with 65.9% of revenue spent in the Western Area.

- That only 49 (11.4%) of Charcoal Businesses obtained loan from any sources in the past 12 months; and that only 6.1% of the 49 Charcoal Businesses that have
obtained loans, have obtained loans from formal banks in the last 12 months.

- That charcoal business that did not obtain loan from any source pointed out they did not obtain loan because they thought that the interest rate was too high (31.9%); while 10.7% pointed out the normal problem of lack of collateral to secure the loan.

- That 47.2% of respondents have savings accrued from charcoal business; this means that more than half 52.8% do not have savings at all, which underlines the hand-to-mouth nature of charcoal business in the country; and that 65% of those respondents who have savings saved less than Le 500,000; while only 2.5% have saved Le 3,000,000 or more.

- Agriculture is the single most important sector of the Sierra Leone economy contributing more than 40 percent to Gross Domestic Product (GDP). Within the agricultural sector, crops, in particular rice, makes the largest contribution, compared with livestock, fisheries, forestry, and cash crop production.

- Rice is the main crop, which is the staple food for the vast majority of the population in the country. The data shows that rice production has been increasing steadily in the country from a total of 888 thousand metric tons in 2009 to 1,259 thousand metric tons in 2013 representing a 41.3 percentage point increase since 2009. In addition, land under cultivation has also increase from 499 thousand Hectare (Ha) in 2009 to 671 thousand Hectare (Ha) in 2013, which is 34.5 percentage points increase since 2009.

- The national average yield of rice is 1.8 metric tons per hectare (Ha) of land cultivated.

- Other crops produced in Sierra Leone include cassava, maze, sweet potatoes and ground nut. These crops have as much influence on the food basket of households in the country as rice.

- The production of these crops has increased significantly from 2008 to 2013.

- The data shows that both volume and value of cocoa, coffee and fishery products exported decline between 2012 and 2013.

- Cocoa being one of the major cash crops of the country attracts large investments in a bid to improve the yield per hectare or land cultivated. The data
shows that cocoa yield has gradually increased from 0.36 Mt/Ha in 2001 to 0.42 Mt/ha in 2008 and from 0.42 Mt/Ha in 2008 to 0.91 Mt/Ha in 2010. Inputs such as seeds and fertilizer are key in achieving a bumper harvest, especially for rice; the data collected shows that 30 thousand bushels of rice were distributed to farmers as seed rice in 2013, whereas more than 12 thousand 50kg bags of urea fertilizer were also distributed to farmers across the country in 2013.

The Agricultural Business Centers (ABCs) are facilities provided by the government to promote production intensification of value addition and increase farm income in line with the national document- Agenda for Prosperity, by assisting farmers with basic needs such storage, milling, fertilizer, tractors and financial service associations, under the Small Holder Commercialization programme (SHCP). Figure 3.5.1 shows that out of the 392 ABCs in the country, Kambia District has the highest number of ABCs (40), followed by Tonkolili District (35), and Port Loko District (34). Western Area, however has the least number of ABCs (15), followed by Bonthe Districts (29), and Kailahun District (28).

Other facilities supplied provided to farmers as shown in Figure 3.5.2 include rice mills, power tillers, rice thresher, and other, which are provided to Farmer Based Organizations (FBOs) operating within the ABCs in the communities.

Recommendation

Charcoal production is still done at the household, informal level; as a result there is no regulatory framework in place to regulate charcoal production, distribution and sales in the country, which is affecting the environmental aspect of our economy. There is therefore need to establish a legal regulatory framework spelling out the coordination mechanism among various stakeholders in the charcoal industry.

There is also need to support charcoal businesses as part of the small-and-medium scale enterprise development in the country since such business have been found to be an important source of income to many households.

There is need to conduct an extended agricultural survey that will capture, production, inputs supplied and labour requirement issues in the country, in collaboration with MAFFS under the National Strategy for the Development of Statistics (NSDS).
1.0 INTRODUCTION

This section contains the background, objectives, justification and data collection and processing procedures of the survey.

1.1 Background

Sierra Leone has suffered many years of bad governance and corruption; which resulted into low growth and widespread poverty, especially among the rural populations in the country. The situation was exacerbated by the 10-year civil conflict which destroyed both economic and social infrastructures in the country. This in turn affected the ability of the state to provide basic services to the population, a situation that continued till the end of the war in 2002.

The Sierra Leone economy is recording significant progress since the end of the war in 2002, which is measured by the impressive gross domestic product (GDP) figures reported by Statistics Sierra Leone. With a population of a little over 6 million and with huge deposits of minerals, Sierra Leone is country of great potentials for growth and development. The economic activities measured by the country’s Gross Domestic product (GDP) have been expanding since 2002 with an average growth rate 6.0 recorded between 2002 and 2012 due mainly to progress made in the Agriculture sector over the years. The discovery and commencement of mining of iron ore in the North, has added new impetus to the government development effort as the economy grew by 15.2% in real terms in 2012 and 20.1 percent in 2013 mainly on account of the production and exports of this ore, which started in 2011.

The Sierra Leone Government adapted decentralization in 2004 as a strategy of reaching out to the many rural populations with services such as health, education, electricity and water supply, and many other amenities. Electricity supply has notably been a major problem for both urban and rural populations in the country and it has taken the government many years to provide such a key amenity to the people. The absence of the electricity from the national grid, the population turned to many sauces of energy for cooking and lighting in their various homes.

Surveys after surveys have revealed that the majority of Sierra Leonean households depend on traditional fuels (charcoal /fuel wood) to meet their daily energy needs for cooking and kerosene for lighting for many decades. After the civil war, which
ended in 2002, people in the rural area have engaged in extensive charcoal and fuel wood production in response to the increasing demand in the urban centers. Today, there is no district among the 12 districts of the country, where charcoal production is not a lucrative business. Charcoal/fuel wood are potentially renewable forest products and are commonly called the poor man’s fuel. It is also a vital energy source for the urban poor and occupies one of the largest industries. Charcoal/fuel wood Low-income households have a higher per capita income. Charcoal/fuel wood accounts of about three-quarters of the total household energy expenditure, in Sierra Leone. Nevertheless electricity is the main source of energy among more affluent households (those in low and medium-density areas); but these households also use charcoal in significant amounts: the difference in expenditure on charcoal/ fuel wood between low-income and high-income household’s is indeed very small, It’s greatest use is for home and outdoor recreational cooking.

Figure 1.1: Source of Energy for Cooking by year and Locality

The energy sources available in Sierra Leone are electricity, gas, kerosene, charcoal and wood. At the National level, 87% and 7% of the households use wood and charcoal respectively as the principal sources of energy for cooking in 2004. The pattern of fuel use for cooking is similar at the provincial and district levels. Between the 1985 and 2004 censuses, there were insignificant drops in the uses of Kerosene and Electricity for cooking at national level. However, charcoal use increased from 1% in 1985 to 7% in 2004. By locality, Figure 1 shows that the proportion of households using charcoal as a source of fuel for cooking increased from 0.9% in 1985 to 9% in 2004 in the rural area, whereas in the urban areas, the proportion of households using charcoal as a main source energy for cooking increase significantly from 3.5% in 1985 to 34.2% in 2004. This significant increase in the use of charcoal in the urban areas as main energy source for cooking coincided with a decline in the generation and supply of electricity in the country.
The main vegetation cover used by the households to produce charcoal in the study countries is obtained from miombo woodlands, which are dry tropical woodlands. The harvesting of miombo woodlands and other forest vegetation types is essential for the livelihood of the rural dwellers (employment, income, consumption goods and services). The harvesting is stimulated by the purchasing power of urban dwellers. This can be seen in the growth in fuel, wood and charcoal consumption substituting electricity and gas as alternative sources of energy, and the increased use of wood based products for building houses. The major consequence charcoal production has is deforestation, which in turn leads to soil erosion, which constitutes an environmental threat in the country and many other sources of livelihood and human counties.

1.2 Aims and Objectives

The aim of this exercise will provide basic statistics (such as price, ownership status, employment, and expenditures) of charcoal business operating in the urban cities. Specific objectives include:

- To obtain basic statistics such as ownership status, age of respondents and educational level of respondents in the charcoal business;
- To determine the scale and economic value of the charcoal industry in urban cities;
- Quantify the employment contribution of charcoal businesses in the country;
- To identify the sources of loans and amount of savings that accrue from charcoal businesses.
- Collected and analysis administrative data on crops, livestock, forestry and fishery products

1.3 Justification

One of the targets of the Millennium Development Goals (MDG) target 9 indicators is to reduce the proportion of population using solid fuel. In Sierra Leone, according to the 2004 Population and Housing Census Report, most households use wood (88%), charcoal (7%) and kerosene 4% for cooking. The pattern of distribution is similar in the regions except for Western Area where 30% of households use
charcoal and 15% use kerosene, nationwide. At the urban/rural level, 74% of households in the urban and 97% of households in the rural use wood. However, another 16% and 8% use charcoal and kerosene respectively in the urban area. Solid fuel comprises wood and charcoal in this analysis; hence most Sierra Leoneans (96%) use solid fuel for cooking.

These statistics show that charcoal and fuel wood constitute an important component of energy production and consumption in the country. However, a major gap in the monitoring of the contribution of these products to the gross domestic product (GDP) is the absence of comprehensive data on them. Although the production of such items is on the increase, especially as economic activities expand, in mining and other sectors of the economy, data is at best scanty and in most cases not available at all. This survey therefore collects basic information on the sale of these commodities in the urban cities of Freetown, Bo, Kenema and Makeni that guides policy to direct and control charcoal production and consummating in the country. Such information is useful to policy maker as they look for possible ways of expanding sources of energy for households.

1.4 Questionnaires

The questionnaire was developed through a consultative process, wherein stakeholders were invited to make meaningful input to the proposed questions designed to capture employment information. Some form of pre-testing was done in order to finalize the instrument. A structure questionnaire was used to train Data Collectors to collect the information from retailers of charcoal and fuel wood in the data collection centers all over the country. The questionnaire captured information such as:

- Basic characteristics of the business and the business owners;
- Characteristics of workers of the business;
- Income and expenditure of the business;
- Savings and loans of charcoal businesses.

1.5 Data Collection

The Charcoal survey targeted a sample size of 135 charcoal selling centers selected from a list of 431 charcoal centers in the country. The survey was a nationwide
survey, covering the regional cities of Freetown, Bo, Kenema and Makeni. This was conducted under the Statistics Act 2002, which makes it mandatory for all business establishments operating in Sierra Leone to respond to Statistics Sierra Leone’s data requests. The Act also stipulates that the content of individual returns received would be kept confidential and used only for statistical purposes. An invitation letter signed by the Statistician General of SSL was enclosed with all questionnaires to encourage business owners/executives to provide the relevant data relating to their businesses and to assure them of the confidentiality of the data collected.

Training of enumerators was conducted for two days; and total number of 43 Data collectors and 3 supervisors were recruited and trained for the data collection exercise. The survey was designed such that Charcoal Establishments were visited several times so as to get the requested data from these establishments.

The Coordinators of the Survey monitored the data collection exercise on a daily basis in Freetown as well as in the Provinces through telephone and other means to assist Enumerators to do their work effectively and diligently. In addition, visits were made to some establishments in Freetown and in the Provinces to validate the data collected in each of these centers.

### 1.6 Sample Achieved

Out of the targeted 135 charcoal establishments, 120 (88.9%) charcoal establishments were successfully interviewed. The non-responses (11.1%) were largely due to delay in retrieving the questionnaires as well as outright refusal to provide the relevant information.

### 1.7 Data Processing

Data capturing for the Charcoal Survey started immediately the data collection was completed in June 2013. Data entry was done within five days after the data collection. The employment data entry centre was centralized at the Statistics Sierra Leone Office headquarters and the information in completed questionnaires was manually scrutinized, edited and coded before sending them for entry. Computer editing was also done as a way of validating the data as the software provided automatic data checks for acceptable values for the variables and checks between different components of the questionnaires.
2.0 DATA PRESENTATION AND ANALYSIS

This section presents and analyses the data obtained from the charcoal survey. This section presents the findings of the survey and highlights key issues for policy formulation.

2.1 Basic General Information of Respondents

The survey collected general information on the individuals and/or establishments operating in charcoal businesses in the country. The information collected ranges from name and locality of business, registration status as well as organization status of the establishments canvassed in the survey, sex of respondents, age, ethnicity and marital status of respondents.

2.1.1 Region/Locality Distribution of Charcoal Establishments

The survey collected information from the regional cities of Freetown in the Western Area, Bo (in the Southern Region), Makeni (in the Northern Region), and Kenema (in the Eastern Region); and the distribution is shown in Figure 2.1.1.

Figure 2.1.1: Distribution of Charcoal Establishments by Region

The data in Figure 2.1.1 shows that majority of charcoal selling centers (55.1%) are in Western Area, followed by the Northern Region with 17.4% and Southern Region 15.7%. This shows that Freetown, the capital city has the largest market for charcoal since it is the largest single urban settlement in the country; whereas the Eastern region has the least number of charcoal centers (11.9).
2.1.2 Sex of Respondents

The charcoal survey collected data on the sex of respondents and the responses are shown in Figure 2.1.2.

**Figure 2.1.2: Sex of Respondents by Data Collection Center**

The results in Figure 2.1.2 show that 81.1% of respondents were females, which means that only 18.9% were male respondents for this survey. At data collection city level, only 11.3 percent were male respondents interviewed in Bo, while only 23.5% of the respondents in Makeni were males and 16.4% of respondents were males in Freetown. However, 33.4% of respondents in Kenema were males. In general, females more females were involved in charcoal trading than males in all the data collection cities.

2.1.3 Age of Respondents

The survey collected data on the age of respondents measured as age in completed years, and the result is shown in Table 2.1.3.

**Table 2.1.3: Age of Respondents by Data Collection City**

<table>
<thead>
<tr>
<th>Data Collection City</th>
<th>Minimum</th>
<th>Mean</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kenema</td>
<td>29</td>
<td>46</td>
<td>58</td>
</tr>
<tr>
<td>Makeni</td>
<td>32</td>
<td>45</td>
<td>78</td>
</tr>
<tr>
<td>Bo</td>
<td>23</td>
<td>41</td>
<td>86</td>
</tr>
<tr>
<td>Freetown</td>
<td>22</td>
<td>40</td>
<td>63</td>
</tr>
<tr>
<td>National</td>
<td>22</td>
<td>41</td>
<td>87</td>
</tr>
</tbody>
</table>
Table 2.1.3 shows that the minimum age of respondent was 22 years, while the maximum age was 87 years at the national level; on average respondents were around 41 years old. This means that charcoal businesses are mainly being run by adults, and that children may only be playing a supportive role.

2.1.4 Religion of Respondent

Respondents were asked to provide information on their religion, and the results are shown in Figure 2.1.4.

Figure 2.1.4: Religion of Respondent by Region

The data in Figure 2.1.4 shows that 73.3% of respondents were Muslims compared with 26.7% Christians, which is very similar to the 2004 Population and Housing Census estimates. This national picture is reflected in all the regions of the country, except in Bo, where the proportion is very close to each other, with half of the respondents being in one region or the other.

2.1.5 Marital Status

The data collected on the marital status of respondents is shown in Figure 2.1.5
Figure 2.1.5: Marital Status

![Marital Status Chart](chart.png)

Figure 2.1.5 shows that majority of respondents operating in the charcoal business are married people (75.6%), mostly females trying to make ends meet for their families.

### 2.1.6 Nationality of Respondents

The survey collected data on the nationality of respondents, and the responses are shown in Figure 2.1.6

![Nationality of Respondents Chart](chart.png)

The data in Figure 2.1.6 shown that majority of persons in the charcoal business (95.1%) are Sierra Leoneans, compared with only 4.9% that are Foreign Nationals. This means that Sierra Leoneans are mainly in control of the charcoal trade in the country—from the production, transportation, distribution and sale of charcoal all around the country.
2.1.7  Educational Level

The Survey collected information on the level of education of persons in the charcoal business and the responses are shown in Figure 2.1.6

Figure 2.1.7:  Educational Level of Respondents

![Educational Level of Respondents](image)

Figure 2.1.7 shows that 63.9% of persons in the charcoal business have never being to school, followed by 23.0% with education level and 11.5% with secondary education level. This means that charcoal business is an important source of income for those who never went to school in this country.

2.1.8  Main Source of Income

Information was collected on whether or not charcoal business was the main source of income to the household; this is shown in Figure 2.1.8

Figure 2.1.8:  Main Source of Income

![Main Source of Income](image)
Figure 2.1.8 shows that 82.4% of respondents believe that charcoal business were the main source of income; this underscores the important role of charcoal not only as a source of cooking but also as a source of income for household.

## 2.2 Charcoal Business Information

The survey obtained information relevant information on the nature of charcoal business being run in the country including ownership status, year of commencement of operations, and number of persons engaged in such businesses.

### 2.2.1 Ownership Status

The information obtained on ownership status of the charcoal business is shown in Figure 2.2.1 and Figure 2.2.1b.

**Figure 2.2.1a: Self Ownership**

![Pie chart showing ownership status](image)

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>86.9</td>
<td>13.1</td>
</tr>
</tbody>
</table>

Figure 2.2.1 shows that 86.9% of respondents own their charcoal businesses, which means that only 13.1% who are not owners of such businesses, although they are playing a key role in the running of the business.
Of the those persons who indicated that they were not owners of the business, 49.1\% of such businesses were owner by the neighbours, 37.6\% were owned by the parent or guardian while 13.3\% were owned by other persons including brothers/sisters and friends.

2.2.2 Length of time in the Business

The survey asked for the year the business was established and the length of time respondents have spent doing the same business, the responses are shown in Figure 2.2.2a and figure 2.2.2b.

Figure 2.2.2a: Year of Commencement of Operations

Figure 2.2.2 shows that most of charcoal businesses (61.6\%) commenced operations between 2001 and 2010, followed by 25.2\% established between 2011 and 2013. This shows that most charcoal businesses were established after relative peace was experienced throughout the country.
Figure 2.2.2b: Length of Experience of Respondents

Figure 2.2.2b shows that most charcoal business operators (33.6%) have sent at least 5 years doing the business; this is followed by those who have spent between 3-4 year (29.9%) and those who have spent between 1-2 years (27.1%). This means that most respondents have spent at least 3 years on doing charcoal business in the country.

2.2.3 Persons Engaged in Charcoal Business

The survey collected information on the number of persons working in the charcoal business including children; and the information is shown in Table 2.2.3.

Table 2.2.3: Number of Persons Engaged by Region

<table>
<thead>
<tr>
<th>Region</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
<th>% Female</th>
<th>Adult</th>
<th>Children (&lt;18 years)</th>
<th>Total</th>
<th>% Children</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eastern</td>
<td>39</td>
<td>69</td>
<td>108</td>
<td>63.9</td>
<td>35</td>
<td>73</td>
<td>108</td>
<td>67.6</td>
</tr>
<tr>
<td>Northern</td>
<td>29</td>
<td>175</td>
<td>204</td>
<td>85.8</td>
<td>58</td>
<td>146</td>
<td>204</td>
<td>71.6</td>
</tr>
<tr>
<td>Southern</td>
<td>23</td>
<td>117</td>
<td>140</td>
<td>83.6</td>
<td>43</td>
<td>97</td>
<td>140</td>
<td>69.3</td>
</tr>
<tr>
<td>Western Area</td>
<td>76</td>
<td>293</td>
<td>369</td>
<td>79.4</td>
<td>142</td>
<td>227</td>
<td>369</td>
<td>61.5</td>
</tr>
<tr>
<td>National</td>
<td>167</td>
<td>654</td>
<td>821</td>
<td>79.7</td>
<td>278</td>
<td>543</td>
<td>821</td>
<td>66.1</td>
</tr>
</tbody>
</table>

Table 2.2.3 shows that about 821 persons were engaged in charcoal business in the regional cities of Western Area (Freetown), Southern Region (Bo), Eastern Region (Kenema) and Northern Region (Makeni). Of this number, 79.7% were women, while 66.1% were children below 18 years of age. This underlines the important contribution of women and children to household income around the country.
Figure 2.2.3 shows that at the national level 79.7% of persons engaged in Charcoal Business are female; the Northern Region however has the highest proportion of 85.8% followed by the Southern Region 83.6% and Western Area 79.4%. This underscores the important role of charcoal business as a source of income to many of the women around the country. In addition, 66.1% of the persons engaged in charcoal business are children below 18 years at the national level, while in the Northern Region the proportion is higher at 71.6% followed by the Southern Region 69.3%; which also underlines the widespread child labour activities in such an informal business environment.

2.4 Financial Resources of Charcoal Businesses

The survey collected data on the financial resources including revenue and expenses of charcoal businesses in the country.

2.4.1 Price and Weight in kg per bag of charcoal

The survey collected data on the price and weight of each bag of charcoal bought and sold and the information is shown in Table 2.4.1

<table>
<thead>
<tr>
<th>Region</th>
<th>Price per Bag of Charcoal (Le)</th>
<th>Average weight per bag (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Minimum</td>
<td>Mean</td>
</tr>
<tr>
<td>Eastern</td>
<td>8,000</td>
<td>10,200</td>
</tr>
<tr>
<td>Northern</td>
<td>12,000</td>
<td>14,867</td>
</tr>
<tr>
<td>Southern</td>
<td>9,000</td>
<td>13,700</td>
</tr>
<tr>
<td>Western Area</td>
<td>15,000</td>
<td>18,993</td>
</tr>
<tr>
<td>Total</td>
<td>8,000</td>
<td>15,724</td>
</tr>
</tbody>
</table>
Table 2.4.1 shows that the price per bag (rice bag) is lower in the Eastern Region than any of the other regions. It also shows that the price of bag of charcoal is more expensive in the Western Area followed by the Northern region than in the other regions, possibly due to the population in Freetown as well as the lack of reliable power supply in the city that could have been used as alternative source for cooking. In the Northern in the surge in the population as a result of iron ore mining may have contributed to the high price of charcoal in the region. Table 2.4.1 further shows that a ‘rice bag’ of charcoal is heavier in the Northern Region weighing 27kg compared with 20kg in the Eastern region and Western Area and 22kg at the National Level.

2.4.2 Bags Sold

The Survey collected data on the amount of bags sold per day and the information is presented in Table 2.4.2.

Table 2.4.2: Quantity Sold

<table>
<thead>
<tr>
<th>Region</th>
<th>Minimum</th>
<th>Mean</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eastern</td>
<td>2</td>
<td>6</td>
<td>11</td>
</tr>
<tr>
<td>Northern</td>
<td>3</td>
<td>12</td>
<td>30</td>
</tr>
<tr>
<td>Southern</td>
<td>1</td>
<td>6</td>
<td>17</td>
</tr>
<tr>
<td>Western Area</td>
<td>1</td>
<td>7</td>
<td>31</td>
</tr>
<tr>
<td>Total</td>
<td>1</td>
<td>8</td>
<td>31</td>
</tr>
</tbody>
</table>

Table 2.4.2 shows that on average, a higher quantity of charcoal 12 (27kg bags) were sold in the Northern Region than even in the Western Area by a single business. This could be due to the increased demand for charcoal in the region resulting from the surge in the population as result of booming iron ore mining activities.

2.4.3 Revenue and Expenditure

Sales/revenue is an important component of business activities, as it represents the income that an establishment receives from the direct sale of its goods or service. It is what the establishments use to meet running cost, pay the wage bill, and where possible plough back the profit into the business. For this survey, SMEs were asked questions bordering on sale/revenue and their views on the business profitability status.
The survey collected data on the revenue and expenditure of the charcoal businesses operating in the country; and the results are displayed in Table 2.4.3.

Table 2.4.3: Revenue and Expenditure in Million of Leones

<table>
<thead>
<tr>
<th>Region</th>
<th>Total Annual Revenue</th>
<th>Total Annual Expenditure</th>
<th>Exp/Rev Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eastern</td>
<td>1,020</td>
<td>249</td>
<td>24.4</td>
</tr>
<tr>
<td>Northern</td>
<td>3,690</td>
<td>2,290</td>
<td>62.1</td>
</tr>
<tr>
<td>Southern</td>
<td>1,580</td>
<td>337</td>
<td>21.3</td>
</tr>
<tr>
<td>Western Area</td>
<td>16,700</td>
<td>11,000</td>
<td>65.9</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>22,990</strong></td>
<td><strong>13,876</strong></td>
<td><strong>60.4</strong></td>
</tr>
</tbody>
</table>

Table 2.4.3 shows that the charcoal trade generated an average of Le 22,990 million annually as income, compared with Le 13,876 million expended annually. This means that there is an annual operating profit of Le 9,114 million. The data also shows that Eastern region spends only 24.4% of their revenue to cover the cost of supplying the charcoal to the local market, compared with 65.9% of revenue spent in the Western Area.

2.5 Loans and Savings

The survey collected information on additional sources of income such as access to loans and savings.

2.5.1 Source of Loan

The data collected on loans and source of loans is shown in Figure 2.5.1 and Figure 2.5.1b.
Figure 2.5.1 shows that only 49 (11.4%) of Charcoal Businesses obtained loan in from any sources in the past 12 months.

**Figure 2.5.1b: Source of Loans**

Figure 2.5.1b shows that only 6.1% of the 49 Charcoal Businesses, who have obtained loans, have obtained loan from formal banks in the last 12 months. This is not surprising given the fact that commercial banks will normally loan only formal businesses that have accounts with them. 85.7% has obtained loans from Microfinance Institutions and 8.2% has obtained loans from other sources including relatives and friends.

### 2.5.2 Amount and Repayment of Loan

The survey collected information on the amount and repayment status of loans obtained and the results are shown in Figure 2.5.2.

**Figure 2.5.2: Amount and Repayment of Loan**
Figure 2.5.2 shows that more than half of the respondents (51%) obtained loan amount of less than Le 500,000; while no respondent obtained loan amount of Le 2,000,000 and above. This underscores the small and informal nature of charcoal business in the country. On the other hand, 65.3% of those who took loans have repaid all of it in the last 12 months.

2.5.3 Why not obtain Loans

The survey asked respondent that have not obtained loans to provide the main reason why they have not access loans to run their charcoal businesses; and the responses are presented in Figure 2.5.2.

Figure 2.5.3: Why not obtain Loans

Figure 2.5.2 show charcoal business did not get loan from any source pointed out they did not obtain loan because they thought that the interest rate was too high (31.9%); 26.4% thought because the business was small; 23.3% thought they will not be given anyway, while 10.7% pointed out the normal problem of lack of collateral to secure the loan.

2.6 Savings

The Charcoal survey collected some information on savings either held in a bank or group or at home as the case may be.
Figure 2.6.1: Have savings with OSUSU Group

Figure 2.6.1 shows that 47.2% of respondents have savings accrued from charcoal business; this means that more than half 52.8% do not have savings at all, which underlines the hand-to-mouth nature of charcoal business in the country.

Figure 2.6.2: Amount of Savings

Figure 2.6.2 shows that 65% of those respondents who have savings saved less than Le 500,000; while only 2.5% have saved Le 3,000,000.

Figure 2.6.3: Savings Outside OSUSU Group and Access to such Savings
The data in Figure 2.6.3 shows that only 4.9% of charcoal businesses who agreed to have saved, have savings in a bank; while 36.2% have savings at home. 49.7% have no savings at all. In addition, of those charcoal businesses that have savings, 27.2% of them do not have access to such savings at any point in time. This is limited access to savings underscores the traditional nature of savings which undermines the key role of savings in business development and expansion.

### 2.7 Financial Assistance

The Charcoal Survey asked respondents whether or not they have received any financial assistance from the government or other development partners and the results are shown in Figures 2.7.1 and 2.7.2

**Figure 2.7.1: Received Financial Assistance**

![Figure 2.7.1: Received Financial Assistance](image)

Figure 2.7.1 shows that only 10.1% of charcoal businesses have received financial assistance in the form of Loans and other support to carry out their business.

**Figure 2.7.2: Expected Role of the Government**

![Figure 2.7.2: Expected Role of the Government](image)
Figure 2.7.2 shows that 83.6% of the charcoal business interviewed expect government to provide micro-finance loans to aid them in their business; while only 13.3% expect government to reduce council taxes on charcoal. This may be due to the fact that either the tax is small or that some charcoal businesses actually do not pay taxes due to the informal nature of such businesses.
3.0 AGRICULTURAL PRODUCTS

Agriculture is the single most important sector of the Sierra Leone economy contributing more than 40 percent to Gross Domestic Product (GDP). Within the agricultural sector, crops, in particular rice, makes the largest contribution, compared with livestock, fisheries, forestry, and cash crop production.

3.1 Crop (Rice) Production

Rice is the main crop, which is the staple food for the vast majority of the population in the country. As a result data collection on rice is shown in Figure 3.1 and Table 3.1 below.

Figure 3.1 Rice Productions and Land Under Cultivation

The data in Figure 3.1 shows that rice production has been increasing steadily in the country from a total of 888 thousand metric tons in 2009 to 1,259 thousand metric tons in 2013 representing a 41.3 percentage point increase since 2009. In addition, land under cultivation has also increase from 499 thousand Hectare (Ha) in 2009 to 671 thousand Hectare (Ha) in 2013, which is 34.5 percentage points increase since 2009. The ‘Tractorization’ policy pursued between 2007 and 2010 as well as the small holder commercialization programme (SHCP) which commenced in 2011 could be the catalyze in expanding land under cultivation as well production of rice as part of the effort to achieve food self-sufficiency in the country.
Table 3.1 Rice Production, Land under Cultivation and Yield per Hectare

<table>
<thead>
<tr>
<th>Year</th>
<th>Area (Ha)</th>
<th>Yield (Mt/Ha)</th>
<th>Production(Mt)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>499,111</td>
<td>1.78</td>
<td>888,417</td>
</tr>
<tr>
<td>2010</td>
<td>549,022</td>
<td>1.87</td>
<td>1,026,671</td>
</tr>
<tr>
<td>2011</td>
<td>603,924</td>
<td>1.87</td>
<td>1,129,338</td>
</tr>
<tr>
<td>2012</td>
<td>717,872</td>
<td>1.59</td>
<td>1,141,417</td>
</tr>
<tr>
<td>2013</td>
<td>671,422</td>
<td>1.87</td>
<td>1,255,559</td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td><strong>608,270</strong></td>
<td><strong>1.80</strong></td>
<td><strong>1,088,280</strong></td>
</tr>
</tbody>
</table>

Source: PEMSD/MAFFS, 2013

The data in Table 3.1 shows that national average yield of rice is 1.8 metric tons per hectare (Ha) of land cultivated, which is closer to the West African rice yield of 2.5 metric tons per hectare (Ha) of land cultivated.

3.2 Other Crops

Other crops produced in Sierra Leone include cassava, maize, sweet potatoes and ground nut. These crops have as much influence on the food basket of households in the country as rice.

Table 3.2.1 Production of Selected Food Crops (1000’M.ton)

<table>
<thead>
<tr>
<th>Year</th>
<th>Cassava</th>
<th>Maize</th>
<th>Sweet Potatoes</th>
<th>Groundnut</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>1,989</td>
<td>24</td>
<td>113</td>
<td>59</td>
</tr>
<tr>
<td>2009</td>
<td>2,815</td>
<td>44</td>
<td>177</td>
<td>70</td>
</tr>
<tr>
<td>2010</td>
<td>3,250</td>
<td>51</td>
<td>206</td>
<td>81</td>
</tr>
<tr>
<td>2011</td>
<td>3,460</td>
<td>52</td>
<td>210</td>
<td>83</td>
</tr>
<tr>
<td>2012</td>
<td>3,585</td>
<td>39</td>
<td>221</td>
<td>85</td>
</tr>
<tr>
<td>2013</td>
<td>3,810</td>
<td>40</td>
<td>225</td>
<td>86</td>
</tr>
</tbody>
</table>

Source: PEMSD/MAFFS, 2013

The data in Table 3.2.1 as shown that production of these crops has increased significantly from 2008 to 2013. Cassava production, for example, increased from 1,989 thousand metric tons in 2009 to 3,810 thousand metric tons in 2013; and ground nut production increased from 59 thousand metric tons in 2008 to 86 thousand metric tons in 2013.
Table 3.2.2: Export Volume (Mt) and Value (Million Leones) of Cash Crops and Fishery Products

<table>
<thead>
<tr>
<th>Year</th>
<th>Coffee</th>
<th>Cacao</th>
<th>Fish Products</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Volume (Mt)</td>
<td>Value (Leones)</td>
<td>Volume (Mt)</td>
</tr>
<tr>
<td>2011</td>
<td>3,787.9</td>
<td>8,695.10</td>
<td>17,999.9</td>
</tr>
<tr>
<td>2012</td>
<td>3,254.5</td>
<td>16,709.00</td>
<td>11,387.20</td>
</tr>
<tr>
<td>2013</td>
<td>2,541.0</td>
<td>12,183.67</td>
<td>4,196.71</td>
</tr>
</tbody>
</table>

Source: Bank of Sierra Leone, Statistics Sierra Leone

Agricultural export include cocoa, coffee and fishery products’ the volume and value of these products are shown in Table 3.2.2. The data shows that both volume and value of cocoa, coffee and fishery products decline between 2012 and 2013

3.3 Cocoa Yield by Production in 2013

Cocoa being one of the major cash crops of the country attracts large investments in a bid to improve the yield per hectare or land cultivated. According to the Planning, Evaluation, Monitoring and Statistics Division (PEMSD) of the Ministry of Agriculture, Forestry and Food Security (MAFFS), cocoa yield has gradually increased from 0.36 Mt/ha in 2001 to 0.42 Mt/ha in 2008 and from 0.42 Mt/ha in 2008 to 0.91 Mt/ha in 2010. The data collected from the Ministry of Agriculture on cocoa yield in 2013 is shown in Table 3.3

Table 3.3.3: Distribution of Cocoa Yield (Mt/ha) by Type of Farmer and Districts.

<table>
<thead>
<tr>
<th>District</th>
<th>Average Yield (Mt/ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Study Area</td>
</tr>
<tr>
<td>Kailahun</td>
<td>0.494</td>
</tr>
<tr>
<td>Kenema</td>
<td>0.417</td>
</tr>
<tr>
<td>Kono</td>
<td>0.345</td>
</tr>
<tr>
<td>National</td>
<td>0.419</td>
</tr>
</tbody>
</table>

Source: IFAD/RCPR/PEMSD Cocoa Research Data - 2013

The data in Table 3.3 shows that the highest cocoa yield was recorded for project supported farmers (434.40 Kg/ha or 0.434 Mt/ha). Non project supported farmers have the least yield (387.91 Kg/ha or 0.388 Mt/ha). The findings further show that the yield at national level (both project supported and non-project supported farmers) is 418.9 Kg/ha or 0.419 Mt/ha.
3.4 Inputs of Production such as Rice seeds and Fertilizer

Inputs such as seeds and fertilizer are key in achieving a bumper harvest, especially for rice. As a result, data was collected on these inputs and displayed in Table 3.4

<table>
<thead>
<tr>
<th>District</th>
<th>Rice seeds (Bushels)</th>
<th>Fertilizer-Urea (in 50kg bags)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kailahun</td>
<td>480</td>
<td>450</td>
</tr>
<tr>
<td>Kenema</td>
<td>1,906</td>
<td>100</td>
</tr>
<tr>
<td>Kono</td>
<td>3,243</td>
<td>1,343</td>
</tr>
<tr>
<td>Bombali</td>
<td>5,095</td>
<td>1,305</td>
</tr>
<tr>
<td>Kambia</td>
<td>5,974</td>
<td>6,355</td>
</tr>
<tr>
<td>Koinadugu</td>
<td>30</td>
<td>90</td>
</tr>
<tr>
<td>Port Loko</td>
<td>1,256</td>
<td>672</td>
</tr>
<tr>
<td>Tonkolili</td>
<td>1,210</td>
<td>N/A</td>
</tr>
<tr>
<td>Bo</td>
<td>3,407</td>
<td>240</td>
</tr>
<tr>
<td>Bonthe</td>
<td>3,689</td>
<td>N/A</td>
</tr>
<tr>
<td>Moyamba</td>
<td>4,237</td>
<td>300</td>
</tr>
<tr>
<td>Puvehun</td>
<td>48</td>
<td>1,320</td>
</tr>
<tr>
<td>W/Area Rural</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>30,575</strong></td>
<td><strong>12,175</strong></td>
</tr>
</tbody>
</table>

Source: PEMSD/MAFFS, 2013; N/A=not available

Table 3.4 shows that more than 30 thousand bushels of rice were distributed to farmers as seed rice in 2013, whereas more than 12 thousand 50kg bags of urea fertilizer were also distributed to farmers across the country in 2013

3.5 Farming Facilities

The government is providing facilities and assets to farmers to assess farmer in the production, processing, storage and marketing of agricultural produce. These facilities include the Agricultural Business Centers (ABCs), Tractors, Power Tillers, Store, drying floor, harvesters, and other facilities
The ABCs are facilities by the government to promote production intensification of value addition and increase farm income in line with the national document- Agenda for Prosperity, by assisting farmers with basic needs such storage, milling, fertilizer, tractors and financial service associations, under the Small Holder Commercialization programme (SHCP). Figure 3.5.1 shows that out of the 392 ABCs in the country, Kambia District has the highest number of ABCs (40), followed by Tonkolili District (35), and Port Loko District (34). Western Area, however has the least number of ABCs (15), followed by Bonthe Districts (29), and Kailahun District (28).
Other facilities supplied provided to farmers as shown in Figure 3.5.2 include rice mills, power tillers, rice thresher, and other, which are provided to Farmer Based Organizations (FBOs) operating within the ABCs in the communities.

### 3.6 Livestock

Livestock is an important component of the nutrition of the population; as a result data was collected on the various livestock types available in the country.

<table>
<thead>
<tr>
<th>Year</th>
<th>Cattle</th>
<th>Sheep</th>
<th>Goats</th>
<th>Chicken</th>
<th>Ducks</th>
<th>Rabbit</th>
<th>Pigs</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>390,638</td>
<td>470,400</td>
<td>550,162</td>
<td>6,502,867</td>
<td>607,967</td>
<td>9,239</td>
<td>35,882</td>
</tr>
<tr>
<td>2009</td>
<td>470,000</td>
<td>620,000</td>
<td>730,000</td>
<td>8,600,000</td>
<td>729,560</td>
<td>11,087</td>
<td>43,058</td>
</tr>
<tr>
<td>2010</td>
<td>517,000</td>
<td>682,000</td>
<td>803,000</td>
<td>9,460,000</td>
<td>802,516</td>
<td>12,196</td>
<td>47,364</td>
</tr>
<tr>
<td>2011</td>
<td>568,700</td>
<td>750,200</td>
<td>883,300</td>
<td>10,406,000</td>
<td>882,768</td>
<td>13,416</td>
<td>52,100</td>
</tr>
<tr>
<td>2012</td>
<td>625,570</td>
<td>825,220</td>
<td>971,630</td>
<td>11,446,800</td>
<td>971,044</td>
<td>14,757</td>
<td>57,310</td>
</tr>
<tr>
<td>2013</td>
<td>688,127</td>
<td>907,742</td>
<td>1,068,793</td>
<td>12,591,260</td>
<td>1,068,147</td>
<td>16,233</td>
<td>63,041</td>
</tr>
</tbody>
</table>

Source: PEMSD/MAFFS, 2013

All categories of livestock show a steady increase in the head count from 2008 to 2013.
4.0 RECOMMENDATION

Charcoal production is still done at the household, informal level; as a result there is no regulatory framework in place to regulate charcoal production, distribution and sales in the country, which is affecting the environmental aspect of our economy. There is therefore need to establish a legal regulatory framework spelling out the coordination mechanism among various stakeholders in the charcoal industry.

There is also need to support charcoal businesses as part of the small-and-medium scale enterprise development in the country since such business have been found to be an important source of income to many households.

There is need to conduct an extended agricultural survey that will capture, production, inputs supplied and labour requirement issues in the country, in collaboration with MAFFS under the National Strategy for the Development of Statistics (NSDS)
5.0 APPENDIX 1: THE QUESTIONNAIRE

CHARCOAL CONSUMPTION ASSESSMENT SURVEY, 2013

IDENTIFICATION

1 REGION.................................................. 2 DISTRICT.......................... 3. CITY.................................

4. STREET ADDRESS..............................................................................................................

5. RESPONDENT NAME ........................................................................................................

INTRODUCTION:

GREETINGS, my name is ......................... I am working for the Statistics Sierra Leone; we are conducting a Survey on Charcoal consumption in the regional cities of Freetown, Bo, Kenema and Makeni. You are one of the people that have been selected for this survey. The main purpose of this survey is to collect information on charcoal consumption, including the number of persons involved, price per bag, access to finance and other socio-economic information. This information is useful for energy planning in the country only; therefore, any information you give will be treated with utmost confidence and your name will not be mentioned in any way. We hope that you will participate in this survey. Your views are important.

Signature of interviewer: .............................................................
Section A: BACKGROUND INFORMATION

<table>
<thead>
<tr>
<th>NO.</th>
<th>Question and Filters</th>
<th>Coding Categories</th>
<th>Skip To</th>
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<tbody>
<tr>
<td>Q1</td>
<td>Name of Respondent</td>
<td></td>
<td>---------</td>
</tr>
<tr>
<td>Q2</td>
<td>Sex</td>
<td>Male 1</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Female 2</td>
<td></td>
</tr>
<tr>
<td>Q3</td>
<td>Age (in completed years)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q4</td>
<td>Religion</td>
<td>Christian 1</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Muslim 2</td>
<td></td>
</tr>
<tr>
<td>Q5</td>
<td>Ethnicity</td>
<td>Mende 1</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Limba 2</td>
<td></td>
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<td></td>
<td></td>
<td>Temne 3</td>
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<td></td>
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<td>Krio 4</td>
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<td></td>
<td></td>
<td>Loko 5</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Kono 6</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fullah 7</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>Other (specify) 8</td>
<td></td>
</tr>
<tr>
<td>Q6</td>
<td>Marital Status</td>
<td>Married 1</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Single 2</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Separated 3</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Divorced 4</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Widowed 5</td>
<td></td>
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<td>Q7</td>
<td>Nationality</td>
<td>Sierra Leonean 1</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Guinean 2</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Other (Specify) 3</td>
<td></td>
</tr>
<tr>
<td>Q8</td>
<td>What is your level of education</td>
<td>Never being to school 1</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Primary 2</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Secondary 3</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Vocational Training Institution 4</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>University 5</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Other (specify) 6</td>
<td></td>
</tr>
<tr>
<td>Q9</td>
<td>Is this the main source of your income?</td>
<td>Yes 1</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>No 2</td>
<td></td>
</tr>
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</table>
### SECTION B: CHARCOAL BUSINESS INFORMATION

<table>
<thead>
<tr>
<th>No.</th>
<th>Questions and Filters</th>
<th>Coding Categories</th>
<th>Skip To</th>
</tr>
</thead>
</table>
| Q10 | Are you a the owner of this charcoal business | Yes 1  
                No 2 | →Q13 |
| Q11 | If no, who is the owner? | Parent/Guardian 
                Neighbour 
                Other | |
| Q12 | Are you paid for selling this charcoal/fuel wood | Yes 1  
                No 2 | |
| Q13 | When did this business start | Year----- | |
| Q14 | How many people working for this business | Number (male)----------  
                Number (female)......... | |
| Q15 | Are your family members involved in this business | Number (Children<18)------  
                Number (Adult 18+).......... | |
| Q16 | How many children and adults involved in this business? | | |
| Q17 | How long have you been doing this business? | Less than one year 1  
                1-2 year 2  
                3-4 years 3  
                5+year 4 | |
| Q18 | What is you main sources of supplied for charcoal? | Lorry from rural areas 1  
                From Neighbour in the city 2  
                I buy from rural areas for myself 3  
                I produce charcoal myself 4  
                Other 5 | |
| Q19 | Would you like to change business when given the opportunity | Yes 1  
                No 2 | |
### SECTION C: REVENUE AND COST OF BUSINESS

<table>
<thead>
<tr>
<th>No.</th>
<th>Questions and Filters</th>
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</thead>
<tbody>
<tr>
<td>Q20</td>
<td>What is the price per bag (weight--------) of charcoal in Leones</td>
<td>Less than 10,000 1 10000-15000 2 16000-20000 3 21000+ 4</td>
<td></td>
</tr>
<tr>
<td>Q20</td>
<td>Actual price</td>
<td>Price-----------------------------</td>
<td></td>
</tr>
<tr>
<td>Q21</td>
<td>How many bags do you sell per day</td>
<td>Less than 2 1 2-5 2 6-10 3 11+ 4</td>
<td></td>
</tr>
<tr>
<td>Q21b</td>
<td>Actual Quantity</td>
<td>Quantity----------------------------</td>
<td></td>
</tr>
<tr>
<td>Q22</td>
<td>What is the average amount of sales per day</td>
<td>Less than 200000 1 200000-599999 2 600000-999999 3 1000000-1599999 4 2000000 and above 5</td>
<td></td>
</tr>
<tr>
<td>Q22b</td>
<td>Actual sales</td>
<td>Amount .................................</td>
<td></td>
</tr>
<tr>
<td>Q23</td>
<td>Do you realize any profit</td>
<td>Yes, small 1 Yes, good 2 No, not at all 3</td>
<td></td>
</tr>
<tr>
<td>Q24</td>
<td>What is the cost per bag (weights........)</td>
<td>Less than 5,000 1 5000-10000 2 11000-15000 3 16000+ 4</td>
<td></td>
</tr>
<tr>
<td>Q25</td>
<td>What is the total cost per week</td>
<td>Amount (Le).............................</td>
<td></td>
</tr>
<tr>
<td>Q26</td>
<td>Have you contracted any loan for this business from any financial institution?</td>
<td>Yes 1 No 2</td>
<td>Q30</td>
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### SECTION C: (Cont’d)

<table>
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<th>No.</th>
<th>Questions and Filters</th>
<th>Coding Categories</th>
<th>Skip To</th>
</tr>
</thead>
</table>
| Q27 | Which institution?     | Formal Banks 1  
Microfinance institution 2  
Money lender 3  
Relative/friends 4  
Other 5                                                   |         |
| Q28 | What was the amount of the Loan? | Less than 500000 1  
500000-999999 2  
1000000-199999 3  
2000000-2999999 4  
3000000 and above 5 |         |
| Q29 | Have you repaid the loan now? | Yes, all of it 1  
Yes, most of it 2  
Yes, little of it 3  
No, not at all 4 |         |
| Q30 | What was the main reason that made you not to access loans from your any financial institution | The need for collateral 1  
Don’t think will be given anyway 2  
Interest rate is too high 3  
Business is too small 4  
Other 5 |         |
| Q31 | Do you currently have savings with the OSUS Group? | Yes 1  
No 2 | Q33 |
| Q32 | What is the minimum member savings in this group per week? | Less than 500000 1  
500000-999999 2  
1000000-199999 3  
2000000-2999999 4  
3000000 and above 5 |         |
| Q33 | Do you currently have savings outside the OSUSU group? | Yes, in a Bank 1  
Yes, at home 2  
Yes, in other Osusu 3  
Yes, with my relative/friends 4  
No, not at all 5 | Q35 |

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*Statistics Sierra Leone P. O. Box 595, Tower Hill, Freetown, SIERRA LEONE*  
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### SECTION C: (Cont’d)

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<tbody>
<tr>
<td>Q34</td>
<td>Do you have access to this savings at any point in time</td>
<td>Yes 1</td>
<td>No 2</td>
</tr>
<tr>
<td>Q35</td>
<td>Have you ever received financial assistance/support from any of the Microfinance Institutions or government?</td>
<td>Yes 1</td>
<td>No 2</td>
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<tr>
<td>Q36</td>
<td>What do you want the government to do for you?</td>
<td>Reduce council taxes on charcoal 1</td>
<td>Provide micro loans to charcoal business 2</td>
</tr>
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